<center>REMARKS</center>

Claims 32-55 were pending in the application. Claims 32-55 have been rejected under 35 U.S.C. §103(a) as being deemed unpatentable over Beshai et al. (U.S. Patent No. 6,721,271), Edholm (U.S. Patent No. 6,721,271), and Mauger et al. (U.S. Patent No. 6,917,586). Of the Claims, Claims 32, 40, 44, and 48 are independent. Claims have been amended to clarify the Applicants' invention. Claim 36 has been canceled. Claim 56 is newly added. Support for the newly added claim is in the Applicants' specification as originally filed. (*See*, for example, Page 15, lines 11-13.) The application as amended and argued herein, is believed to overcome the rejections.

Regarding rejections under 35 U.S.C. §103(a)

Claims 32-43 and 48-55 have been rejected under 35 U.S.C. §103(a) as being deemed unpatentable over Beshai et al. (U.S. Patent No. 6,721,271) in view of Massa et al. (U.S. Patent No. 6,658,469) and further in view of Edholm (U.S. Patent No. 6,600,721).

Claims 44-47 have been rejected under 35 U.S.C. §103(a) as being deemed unpatentable over Beshai et al. (U.S. Patent No. 6,721,271), in view of Massa et al. (U.S. Patent No. 6,658,469), in view of Edholm (U.S. Patent No. 6,600,721) and further in view of Mauger (U.S. Patent No. 6,917,586).

To establish a prima facie case for obviousness under 35 U.S.C. 103(a), (1) there must be some suggestion or motivation to combine reference teachings; (2) there must be a reasonable expectation of success; (3) the references when combined must teach or suggest all the claim limitations. For the reasons discussed below, it is respectfully submitted that the Office has not established a prima facie case under 35 U.S.C. 103(a) for claims 32-55 and that therefore, claims 32-55 are allowable.

The references when combined do not teach or suggest all the claim limitations

Beshai does not teach or suggest at least,

"if an amount of data located in a first memory buffer in a local system associated with a remote direct memory access (RDMA) request does not exceed a maximum

transfer size for a single memory to memory transfer operation over a data network to a remote memory buffer in a remote system"

as required by, for example, claim 32 of the subject application.

Beshai merely discusses a 3-stage switch which directs variable-sized packets received on a plurality of ingress modules through a switch core to one of a plurality of egress modules. The variable-sized packets are divided in the ingress modules into packet segments of equal size and reconstructed before egress from the switch. Each packet segment is appended to a header that contains a label which identifies the ingress module. Packet segments having a common egress module may be aggregated into parcels of a predetermined capacity.

In contrast to the applicants' claimed invention, Beshai is merely directed to managing packet throughput within a 3-stage switch, by dividing packets into predetermined equal size segments and aggregating packet segments for a same egress module. There is no teaching or suggestion of "amount of data located in a first memory buffer in a local system associated with a remote direct memory access (RDMA) request" or "a single memory to memory transfer operation over a data network to a remote memory buffer in a remote system". (*See* Applicants' specification Fig. 6, local system 20, remote system 30, Fig. 7, RDMA request 62.)

In contrast, data transferred within the switch from ingress modules to egress modules is based on packet segments of equal size. *(See,* Beshai, for example, Fig. 1, column 8, line 32 – column 9, line 9.)* Beshai merely discusses aggregation of packet segments destined to egress from the same egress module into parcels. The packets in the parcel may belong to different packets. (*See* col. 11, line 62 – col. 12, line 40.) There is no discussion of a "memory to memory transfer operation over a data network to a remote memory buffer". Beshai merely discusses egress-state memories. There is no teaching or suggestion of performing a transfer operation in response to an RDMA request.

Massa does not teach or suggest at least,

"if an amount of data located in a first memory buffer in a local system associated with a remote direct memory access (RDMA) request does not exceed a maximum transfer size for a single memory to memory transfer operation over a data network to a remote memory buffer in a remote system"

as required by, for example, claim 32 of the subject application.

In contrast, Massa merely discusses two modes of transferring data – message and remote direct memory access (RDMA). If the size of the data to be transferred is below a threshold size, the data is transferred using a message. If the size of the data to be transferred is above the threshold size and receiving buffers are sufficient size, the data is transferred using one or more RDMA operations. There is no teaching or suggestion of an association of data in a buffer with a transfer operation (or subsequent transfer operations), where the association is dependent upon a maximum transfer capacity of the system. In contrast, the amount of data transferred is merely equal to the size of the set of receiving buffers provided. (*See*, Massa, for example, column 13, lines 43-49.) In addition, there is no teaching or suggestion of "a maximum transfer size for a single memory to memory transfer operation over a data network to a remote memory buffer in a remote system". In contrast, Massa merely indicates that one or more RDMA write operations may be performed in order to transfer the data into the applications' set of receiving buffers. (*See*, for example, Col. 13, line 30 – Col. 14, line 16.)

Claims 33-35 and 37-39 are dependent claims that depend directly or indirectly on claim 32 which has already been shown to be non-obvious over the cited art.

Furthermore, Beshai does not teach or suggest a "descriptor" as claimed by the Applicants in dependent claim 34. In contrast, Belshai merely describes a packet segment that may be stored in memory in a switch. Belshai's packet segment does not teach or suggest the Applicants' claimed "descriptor". (*See*, for example, Fig. 7, descriptor (80).) The Applicants' descriptor specifies the remote memory buffer to which the data is to be transferred and to indicate a portion of data remaining to be transferred for the RDMA request.

Independent claims 40, 44 and 48 recite a like distinction and are thus patentably distinguished over the cited art. Claims 41-43 depend directly or indirectly on claim 40, claims 45-47 depend directly or indirectly on claim 44 and claims 49-55 depend directly or indirectly on claim 48 and are thus patentably distinguished over the cited references.

Beshai has been cited for its teaching of packet management within a switch. Mauger has been cited for its teaching of "a host fabric adaptor". Edholm has been cited for its teaching of bandwidth management by adjusting latency between packets. Massa has been cited for its teaching of RDMA operations. One skilled in the art of RDMA operations would not look to packet management within a switch, host fabric adaptors or adjusting latency between packets to

perform a single memory to memory transfer operation over a data network to a remote memory buffer in a remote system.

Therefore, separately or in combination, Beshai, Edholm, Massa and Mauger do not teach or suggest the applicants' claimed invention. Even if combined, the present invention as now claimed does not result as argued above.

Thus, applicants respectfully request that the rejection of Claims 32-43 over Beshai et al. in view of Edholm and Claims 44-47 over Beshai, Edholm in view of Mauger be withdrawn.

Accordingly, the present invention as now claimed is patentably distinguished from the cited references. Removal of the rejections under 35 U.S.C. § 103(a) and acceptance of claims 32-35 and 37-56 is respectfully requested.

CONCLUSION

In view of the foregoing, it is submitted that all claims (claims 32-35 and 37-56) are in condition of allowance. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the above-referenced application.

Should an extension of time be necessary to respond to the outstanding Office Action, applicants respectfully petition for an extension of time pursuant to 37 C.F.R. § 1.136(a). Please charge our Deposit Account No. 50-0221 to cover the fee for the extension.

Respectfully submitted,

Date: _5/29/07____

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